

NOTES ON SOME QUEENSLAND AND PAPUAN REPTILES.

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(Plates XI to XV.)

LACERTILIA.

NEPHRURUS ASPER, Günther.

(Plate XI.)

A LIVE specimen of this grotesque little gecko was recently sent to Brisbane from North Queensland, being subsequently donated to the Museum. Its appearance in life is shown in Plate XI., but a short cinematograph film would be needed to demonstrate the range of its curious movements. When disturbed, it has the habit of raising itself to the full extent of the long thin legs and then lowering its body nearly to the ground; this being done repeatedly. Occasionally, when teased, it gives a short side-spring and emits a cough-like bark, which has gained for it the name of "Barking Lizard." It bites so determinedly that when gripping a finger it may be lifted in that way from the ground. The jaws are too weak, however, for it to inflict much damage. Broom notes a specimen of a more docile temperament.¹ Our lizard lived in captivity for a few weeks, being fed on grasshoppers. The white transverse bands were very noticeable in this specimen; but this feature is somewhat variable. The appearance of the skin brings to mind the test of a sea-urchin. In addition to specimens from several localities in North and Western Queensland, we have an example from Pine Creek, Northern Territory (received through Mr. G. F. Hill). The Horn Expedition secured this lizard at Alice Springs, and Lonnberg and Andersson have recorded it from Kimberley, N. W. Australia.

LIALIS BURTONII, Gray.

(Plate XII.)

The two specimens here illustrated had been in captivity for several months. They represent varieties A and C as noted by Boulenger in the British Museum Catalogue. Both these snake-like lizards were captured by the writer in Brisbane.

EGERNIA BUNGANA, De Vis.

(Plate XIII.)

In 1887 De Vis described this species,² but the type has unfortunately disappeared. The Queensland Museum now contains two specimens, one of which was recently secured alive by the writer at Tambourine Mountain. This lizard

¹ Broom, Proc. Linn. Soc. N.S.W., xxii, 1897, p. 640.

² De Vis, Proc. Linn. Soc. N.S.W. (2), ii, 1887, p. 814.

is the giant of Australian skinks and grows to over 2 feet in length. It is quite common at Tambourine, and may be frequently seen in or near other mountainous rain-forests in South-Eastern Queensland. As it seldom ventures far from its haunts in the hollows of large logs on the ground, specimens are not easy to obtain. It is structurally allied to *Egernia major*, as pointed out by De Vis, and in the number, proportions, and dispositions of the head shields and body scales it is difficult to find distinctions. An azygous nuchal shield, in contact with the interparietal, is present in both our specimens of *E. bungana* and is absent in our series of *E. major*, but shields in this region are often variable. *E. bungana*, however, is strikingly distinct because of its colouration, its habitat, and the larger size of adults. The entire dorsal and dorsal-lateral surface is a uniform shining black; near to the ventral region this merges to a brownish tint, and the ventral surface is yellow, with the exception of the throat which is salmon colour. The eyelids are yellowish white, and the tongue is bluish. Several young specimens seen were also of a shining black colour above. Because of its large black scales this lizard has received at Tambourine the curious name of "Land Mullet." It has the habit of lying out on logs in the sunlight, especially after wet weather. A specimen, 22 inches in length, was chopped out of a hollow log by the writer. In captivity it thrives well on raw meat. When handled or approached it gives out vigorous blasts of breath, the bellow-like movement of the body being somewhat remarkable. The specific term is derived from its aboriginal name.

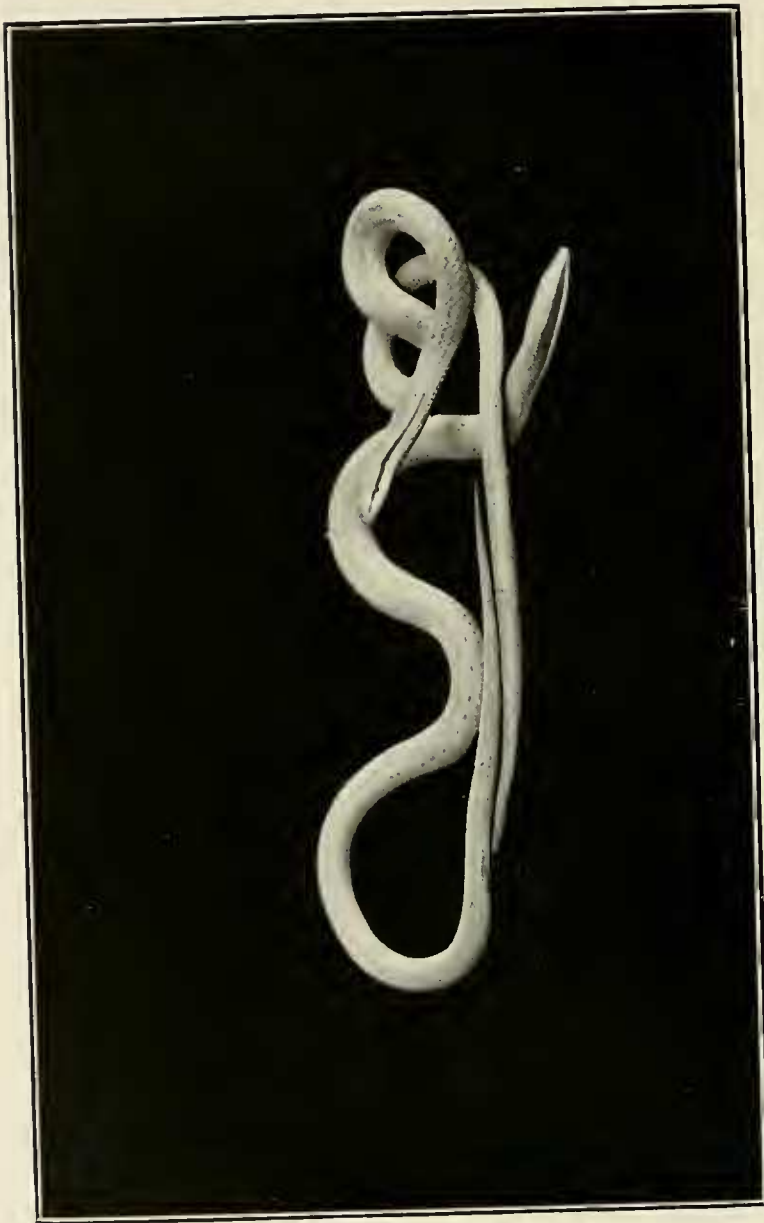
LYGOSOMA (LIOLEPISMA) SPECTABILE (De Vis).³

Six specimens which agree well with this species were collected by the writer at Tambourine Mountain in April 1917. In regard to the proportions of the tail the original description needs amending, as it is more than half as long again as the head and body, both in the type and in our later specimens. *L. spectabile* may be distinguished from *L. musclicinum*, apart from certain differences in colouration, by the greater number of lamellæ under the fourth toe.

LYGOSOMA (HINULIA) TRYONI, sp. nov.

Habit lacertiform: limbs pentadactyle; the distance between the end of the snout and the fore limb is contained one and one-half times in the distance between axilla and groin. Snout short, obtuse; lower eyelid scaly; nostril in a single nasal, followed by a series of loreals, which are not superposed; no supranasal; frontonasal broader than long, forming a wide suture with the rostral and a narrower one with the frontal; latter a little shorter than the frontoparietal and interparietal together, in contact with the first two supraoculars; four supraoculars, second largest, and in addition there is a small shield not serially aligned with either the supraoculars or the supraciliaries; eight supraciliaries; frontoparietals and interparietals distinct; the parietals form a suture behind; two pairs of enlarged nuchals; parietal bordered laterally by a large shield;

³ Loc. cit., p. 819.



LIALIS BURTONII, Girard.

From life.



EGERNIA BUNGANA, De Vis.

From life.

two anterior temporals; six upper labials, the fourth being below the centre of the eye; ear-opening subcircular, a little smaller than the eye-opening; no lobules. Forty smooth scales around middle of body, laterals smallest; preanal scales enlarged. The toes of the adpressed limbs overlap; digits laterally compressed; 16-19 smooth, undivided lamellæ under the fourth toe. Tail longer than head and body.

In colouration this skink somewhat resembles *L. tenue*, being brownish above, mottled with black; along the sides the dark markings are almost continuous, but do not form a regular band; the sides of both head and body are marked with light spots; throat marbled with black, otherwise the ventral surface is whitish.

Total length 223 millim.; tail 122; fore limb 25; hind limb 35; head 22, width of head 14.

Described from two specimens collected by Mr. Henry Tryon in the Macpherson Ranges, 3,000 ft., South Queensland. Reg. Nos. J. 17/3023 (type), 3024 (co-type).

Lygosoma tryoni resembles *L. quoyi* in the number of its body scales, but is readily distinguished by its more obtuse snout, shorter tail, lesser number of lamellæ under the fourth toe (which are undivided), the absence of a prefrontal suture, and the disposition of the upper labials in relation to the eye.

OPHIDIA.

DIPSADOMORPHUS IRREGULARIS (Merr.).

Through the courtesy of Mr. D. Le Souef, Director of the Zoological Gardens, Melbourne, we recently received a snake captured at Dunk Island, which he noticed was quite distinct from the common Brown Tree Snake. This specimen is olive brown above, being darker in the vertebral region and lighter on the sides. There are no transverse markings. The ventrals are yellowish and more or less clouded with darker markings which are still more pronounced on the subcaudals. The anterior palatine and mandibular teeth are enlarged. Scales in 21 rows, 15 near the anus; ventrals 261; anal entire; subcaudals 87 (incomplete). This is the first record of the widely spread and variable *D. irregularis* so far south, though it has been noted from Torres Strait Islands. Possibly Maeleay's *D. boydii*, from Ingham, North Queensland, should be more correctly placed in its synonymy than with *D. fuscus*. Mr. E. J. Banfield, Dunk Island, has since forwarded a second specimen. He records "Wat-tam" as the aboriginal name, and gives an interesting account of its habits in "Tropic Days" (Fisher Unwin, 1918), p. 240. Like its congener, *D. fuscus*, it feeds on birds, and Mr. Banfield states that the blacks regard its bite as fatal. Although its fangs are situated at the back of the mouth, there may be some basis for this view. The Boomslangs of South Africa were once regarded as harmless, but F. W. Fitzsimons has shown that the bite is occasionally attended with fatal results to man. It is obvious that certain species of Opisthoglypha need to be handled with caution.

TOXICOCALAMUS LONGISSIMUS, Boulenger.

In 1905 De Vis described a snake from Vanapa Valley, Papua, as *Vanapina lineata*,⁴ both genus and species being recorded as new. His description concludes with the query—"Is this *Apistocalamus loria*, Blgr.?" Unfortunately the type has disappeared, but there is no doubt that the genus *Vanapina* should be included in Boulenger's *Toxicocalamus*,⁵ which De Vis had overlooked. It seems probable that the actual species is also identical with *T. longissimus*. The differences to be noted from the descriptions are very slight, but as Boulenger's specimens came from Woodlark Island it may be that the mainland form is separable as a variety. *Apistocalamus loria* is, of course, quite distinct. The characteristics of the six Papuan snakes in this group have been tabulated by Boulenger,⁶ who states that the later genera *Apistocalamus* and *Pseudapistocalamus* are doubtfully distinct from *Toxicocalamus*.

PSEUDELAPS HARRIETTÆ (Kieffit).

(Plate XIV.)

On 3rd August, 1917, the writer secured from under a heap of rubbish in a Brisbane garden five young specimens of the White-crowned Snake—*Pseudelaps harrietta* (Kieffit). These were each about 160 mm. in length and had evidently just emerged from the eggs, as seven empty egg-cases were found close by. These little snakes were lead-coloured above; the white circle on the head was very sharply defined and enclosed a shining black patch on the frontal and parietal regions. The light longitudinal lines on the dorsal and lateral scales of the body were prominent, and anteriorly these were continued on the lateral scales until they terminated in the white markings of the lower labials. In life the pupil is almost circular. In three specimens the nasal shield was not in contact with the preocular. In all five the scales were in 15 rows, and the anal was divided. The ventrals varied from 172 to 180 and the paired subcaudals from 28 to 38 in addition to single terminal scale.

Pseudelaps harrietta often shows great agility when disturbed, and throws its body from side to side with quick convulsive movements. Adult specimens have the power of flattening themselves to a surprising extent. This snake will sometimes raise the anterior fourth of the body almost vertically, whilst the head is sharply bent at a right angle, the attitude bringing to mind some of the illustrations of the Indian cobra.

In life the general colour of adults is a dark slate, the light longitudinal lines being barely noticeable. The white markings on the head encircle a patch of shining black. On the ventral surface the prevailing colour is a lighter slate than that of the dorsum. *Pseudelaps harrietta* is quite a common snake in the Brisbane district.

⁴ De Vis, Ann. Qld. Mus., No. 6, 1905, p. 48.

⁵ Boulenger, Ann. Mag. Nat. Hist. 1896, xviii, p. 152.

⁶ Boulenger, Ann. Mag. Nat. Hist. 1908, i, p. 249.



PSEUDELAPS HARRIETTÆ (Krefft).

From life.

LATICAUDA COLUBRINUS (Schneid.).

In his diagnosis of four species of *Platurus* in the British Museum Catalogue of Snakes, Boulenger sectioned them according to the presence or absence of a keel on the posterior ventrals. This characteristic does not appear to be of quite unexceptional value, and the matter has a direct relation to the status of *Platurus frontalis*, De Vis.⁷ Captain F. Wall states⁸ that he has found a median ventral keel "in at least three specimens of what I consider undoubted *P. laticaudatus*," and he thinks that *muelleri* should be included with this species. Stejneger⁹ somewhat ambiguously refers to *L. muelleri* as "a *L. laticaudatus* with a ventral keel." Out of fourteen specimens of *colubrinus* in the Queensland Museum, one has a distinct keel and another has a trace. The type of "*Platurus frontalis*" agrees in detail with *L. colubrinus*, but a median ventral keel is present on the posterior ventrals. In view of the variability noted, there are insufficient grounds for separating *frontalis* from *colubrinus*. Barbour¹⁰ prefers to consider *L. colubrinus* itself as a subspecies of *laticaudata*. As pointed out by Ogilby,¹¹ the generic term *Laticauda* has better claims than *Platurus* for these snakes.

HYDRELAPS DARWINIENSIS, Boulenger.

Whilst examining specimens of juvenile *Laticauda colubrinus* in the Queensland Museum collections, a solitary example of the apparently rare sea snake *Hydrelaps darwiniensis* was found by the writer. The superficial resemblance between the two accounts for their being mixed in the old collection. Our specimen agrees well with Boulenger's description,¹² but the tail is relatively longer. The scale formula is as follows:—Body rows 27; ventrals 168; anal 2; subcaudals 36 (single). Total length 380 mm.; tail 48. Unfortunately no locality is available. Lonnberg and Andersson have recorded a specimen from Broome.

LAPEMIS HARDWICKII, Gray.

The Queensland Museum has a specimen of this short sea snake, which was captured at Townsville. The ventral surface was roughly opened up for purpose of preservation, and it is thus impossible to give a complete scale data. This is the first example to be noted in our register, but Werner has recorded it from Shark's Bay, Western Australia.¹⁴ We have followed Stejneger in using *Lapemis* in preference to *Enhydris*.

⁷ De Vis, Annals Qld. Museum, vi, 1905, p. 48.

⁸ Wall, P.Z.S. 1903, p. 96.

⁹ Stejneger, Herp. of Jap., Bull. 58, U.S. Nat. Mus. 1907, p. 402.

¹⁰ Barbour, Mem. Mus. Comp. Zoolog. Harv., xiv, 1912, p. 131.

¹¹ Ogilby, Proc. Linn. Soc. N.S.W., xxiii, 1898, p. 363.

¹² Boulenger, British Museum Catalogue, iii, p. 270, pl. xii, fig. 1.

¹⁴ Werner, Fauna Sudwest-Aus., ii, p. 263, 1909.

FURINA ANNULATA (Gray).

(Plate XV.)

The larger forms of *Furina annulata* (Gray) have a remarkable habit of raising one or more loops of the body and holding them almost vertically aloft. This attitude is well illustrated in Plate XV, and they maintain this position with surprising rigidity. This is probably an instance of an aposematic condition.

Although this snake has been catalogued under the name of *Furina occipitalis*, Gray's name, given with a description in the appendix to Grey's Journals of Two Expeditions of Discovery in North-west and Western Australia, vol. ii, p. 443, published in 1841, has priority.

DISTEIRA MAJOR (Shaw).

Examination of the type of *Disteira nasalis*, De Vis,¹⁵ shows that this cannot be separated from *D. major*. It was described from a young specimen only 400 mm. long. De Vis attached importance to the division of the nasal by a line to the prefrontal, but this condition is present only on the left side. Cope described a similar feature in his note on *D. dumerilii*,¹⁶ which is included by Boulenger in the synonymy of *D. major*.¹⁷ The posterior angle of the left nasal is produced between the median prefrontal suture and thus reduces its length. There are two superimposed anterior temporals, the lower being somewhat in advance, and below this there is a very small labial which was evidently not considered by De Vis. There are thus seven, and not six, upper labials. On the right side there is a small shield between the two postoculars and the anterior temporals. The posterior pair of chin-shields are so small that they can only just be differentiated from the surrounding scales. With these necessary emendations it is scarcely possible to separate *D. nasalis* from *D. major*.

DISTEIRA ELEGANS (Gray).

Variation in a Sea Snake and its Young.—On 13th March, 1917, the Queensland Museum received a sea snake which had been captured in the Pine River, Mr. Cross being the donor. This proved to be the common Elegant Sea Snake, *Disteira elegans*, Gray, which is the species most frequently seen on our coast. Examination of this snake showed that it contained eight young, which were evidently near the period of birth, the lepidosis being well developed. As the range of variation in these snakes has been the subject of no little controversy, the writer thought it would be an excellent opportunity to place on record some of the chief features of the mother and young.

Seven of the eight embryos were removed from the associated membranes and closely examined. The prevailing colour on the ventral and lateral surface was a beautiful French gray. This was continued on the back in a series of from forty-five to fifty-two bands, which alternated with wider dark patches. The light bands were themselves regularly dark-spotted on the dorsum, whilst

¹⁵ De Vis, Ann. Qld. Mus., No. 6, p. 48, 1905.

¹⁶ Cope, Proc. Ac. Philad., 1859, p. 347.

¹⁷ Boulenger, Brit. Mus. Cat. Sn. iii, p. 289, 1896.



FURINA ANNULATA (Gray).

From life.

the sides were marked with smaller spots, the whole forming a very handsome pattern. The head was dark above and on the sides, and on the median ventral surface the dark markings were almost continuous.

These specimens varied but little in length, all being about 360 mm. The diameter of the circular fore part of the body was considerably more than half of the vertical diameter of the compressed posterior part. The chin-shields showed but little variation, although the degree of contact of the posterior pair varied. A large terminal caudal shield was present in each specimen. Some of the variations noted are set forth in the following table, 2878 being the registered number of the mother:—

—	No. of bands.	Preoc.	Postoc.	Up. labials.	Ant. Temps.	Sc. Neck.	Sc. Body.	Ventrals.
2878	48	1	2	7	1	27	44	380
1	49	1	1	7-2 last small	1	28	46	367
2	45	1	1	7-2 "	1	28	44	362
3	45	1	1	7-3 "	2	28	42	351
4	48	1	2	{ right 7-3 left 7-2 }	{ 2 right 1 left }	28	40	350
5	47	1	2	{ right 7-3 left 7-2 }	2	26	40	363
6	45	1	2	{ right 8* left 7-2 }	1	25	40	353
7	51	1	1 or 2	{ right 7 left 7-3 }	{ 1 right 2 left }	28	41	377

* Small additional labial between 4th and 5th.

The exerted hemipenes show that numbers 4, 5, 6, and 7 are males.

The shields on the upper surface of the head presented no special divergencies. In each the prefrontals were in contact with the second labial. There was some little variation in the lengths of the median sutures between the pairs of prefrontals and nasals. The variation in the number of ventrals was from 350 to 380 (the mother), and this suggests that the male parent had a considerably lower range than that of the female. Boettger¹⁸ has pointed out that the males have fewer ventrals, but our figures do not give much support to his conclusions. The counting of the ventral series in the young presented some difficulties owing to the irregularities, especially in the umbilical region, but although the figures may not be absolutely correct they are substantially so. The scale series around the body appear to be fairly constant in number.

The presence of one or two temporals is of considerable importance. The fifth labial may become laterally divided and its upper portion will then form a lower and second anterior temporal. This is somewhat in advance of the upper, but the snake would probably be described as possessing two superposed anterior temporals. Stejneger has noted a variation of this type in his study of *Disteira melanocephala*.¹⁹

A full description of the parent snake follows. It will be noted that the difference between the slender fore part of the body and the compressed posterior is very much greater in the adult.

¹⁸ Boettger, Zool. Anz., 1888, p. 395.

¹⁹ Stejneger, Herpet. of Japan, Bull. 58, U.S. Nat. Mus., p. 425, 1907.

Fore part of the body small and circular, about 16 mm. in diam.; posterior part flattened, its vertical diameter being fully three times that of the neck. Rostral slightly broader than deep; nasals a little shorter than the frontal, nearly three times as long as the suture between the prefrontals; frontal sub-hexagonal, shorter than parietals, longer than broad, a little longer than its distance from the rostral; one pre- and two postoculars; one large anterior temporal, followed by a second. Seven upper labials, second largest, third and fourth entering eye. Two pairs of subequal chin-shields, the second being only in contact anteriorly; 27 scales round the neck, 44 round the body; scales slightly imbricate. They are prominently keeled on the posterior part of the body where the ventral scales are also feebly marked with two keels, but the carination entirely disappears on the neck. Ventrals 350, distinct throughout, though a little irregular in places. There are two pairs and 46 single subcaudal scales between the anal region and the large terminal shield.

The head, body, and tail are of a dirty whitish colour, with yellowish tinges. On the dorsal surface there are 48 large rhomboidal spots, pale slate on the body but somewhat greenish near the head; these alternate with a series of smaller lateral spots, which are less distinct anteriorly. There are no special colour patterns on the head. A series of black spots on the ventral scales forms a well-marked interrupted black line on the anterior half of the body.

Total length 1.490 mm.; tail 120. Reg. No. Q.M.J. 17/2878.

The writer believes that the variations here noted in the mother and offspring, although of considerable interest, are but an indication to the far greater variation within the entourage of a hybrid species.

Following other workers, we have examined the teeth of certain specimens of *Hydrophis*, and these show under magnification traces of the grooves which were once thought to be distinctive of *Disteira* and which are certainly much more obvious in some species than in others. J. Van Denburgh and J. C. Thompson have set out the evidence on this point.²⁰ As the distinction between these genera seems to break down, we have preferred to call the snakes actually under review *Disteira elegans*. In the larger number of the body scales, these specimens agree with Boulenger's *Disteira grandis*.²¹ In his monograph of the Sea Snakes, Wall²² has interpreted the range of Shaw's *spiralis* so as to include some half-a-dozen others since described. Should this attitude be adopted, and there are many reasons for so doing, certain of the Queensland Museum specimens now named as *Disteira elegans* should be designated as *spiralis*. Lonnberg and Andersson's *Disteira mjobergi*²³ would also come near to *spiralis* in the broader sense. Probably many of the difficulties in this group would be best solved by using trinomials.

²⁰ Proc. California Acad. Sci., iii, p. 41, 1908.

²¹ Brit. Mus. Catalogue, iii, p. 293.

²² Mem. Asiatic Soc. Bengal, vol. 2, No. 8, 1909.

²³ Vet. Ak. Handl., Stockholm, 52, No. 3, p. 13, 1913.